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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/493,677 01/28/00 SATO

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EXAMINER
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LEO, L

ART UNIT	PAPER NUMBER
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3743

DATE MAILED 1/30/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
**09/493,677**

Applicant(s)  
**Sato et al.**

Examiner  
**Leonard R. Leo**

Group Art Unit  
**3743**



☒ Responsive to communication(s) filed on Nov 17, 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-9 and 15-21 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-9 and 15-21 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 3

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## **DETAILED ACTION**

### ***Election/Restriction***

Applicant's election without traverse of the invention of Group I, claims 1-9 and 15-21 in Paper No. 8 is acknowledged. However, claims 10-14 are cancelled.

Applicant's election with traverse of the species of "a shape whose sectional width tapers as it goes away at a right angle from said heat receiving face" in Paper No. 8 is acknowledged. The traversal is on the ground(s) that the generic claims 3 and 18 are believed allowable, since they are dependent on alleged allowable base claims. This is not found persuasive because an examination on the merits of the claims has not been made and therefore the conclusion of allowability has not been determined. The species have been presented in a Markush type claim, where the nonelected species limitations of a "rectangle and trapezoid" will be withdrawn.

The requirement is still deemed proper and is therefore made FINAL.

### ***Drawings***

The drawings are objected to because Figures 12-14 are not designated by a legend such as "Prior Art". The legend is necessary in order to clarify what applicant's invention is. MPEP § 608.02(g). Correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 5, 9 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clearly understood how the heat receiving face which defines the column can protrude further than the column.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Hatada et al (Figures 17-18).

Claims 1-2 and 5 (as understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Kuno et al.

Claims 1-2, 5 (as understood), 15-16, 17 (as understood) and 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Jordan et al.

Claims 1-3, 5 (as understood), 7 and 9 (as understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Elgar et al.

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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 8 and 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuno et al or Elgar et al in view of Lin.

Kuno et al or Elgar et al discloses all the claimed limitations except protrusions on the pillar-type protrusions.

Lin discloses a heat sink comprising a column 13 and a plurality of pillar-type protrusions 11 with unlabeled protrusions for the purpose of improving heat exchange.

Since Kuno et al or Elgar et al and Lin are both from the same field of endeavor and/or analogous art, the purpose disclosed by Lin would have been recognized in the pertinent art of Kuno et al or Elgar et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Kuno et al or Elgar et al protrusions on pillar-type protrusions for the purpose of improving heat exchange as recognized by Lin.

Regarding claims 15-21, Lin discloses fan 30 mounted on the heat sink.

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Claims 4, 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan et al in view of Lin, as applied above.

*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry of a general nature, relating to the status of this application or clerical nature (i.e. missing or incomplete references, missing or incomplete Office actions or forms) should be directed to the Technology Center 3700 Customer Service whose telephone number is (703) 306-5648.

Any inquiry concerning this Office action should be directed to Leonard R. Leo whose telephone number is (703) 308-2611.



LEONARD R. LEO  
PRIMARY EXAMINER  
ART UNIT 3743

January 29, 2001